

FIGURE 1
(Prior Art)

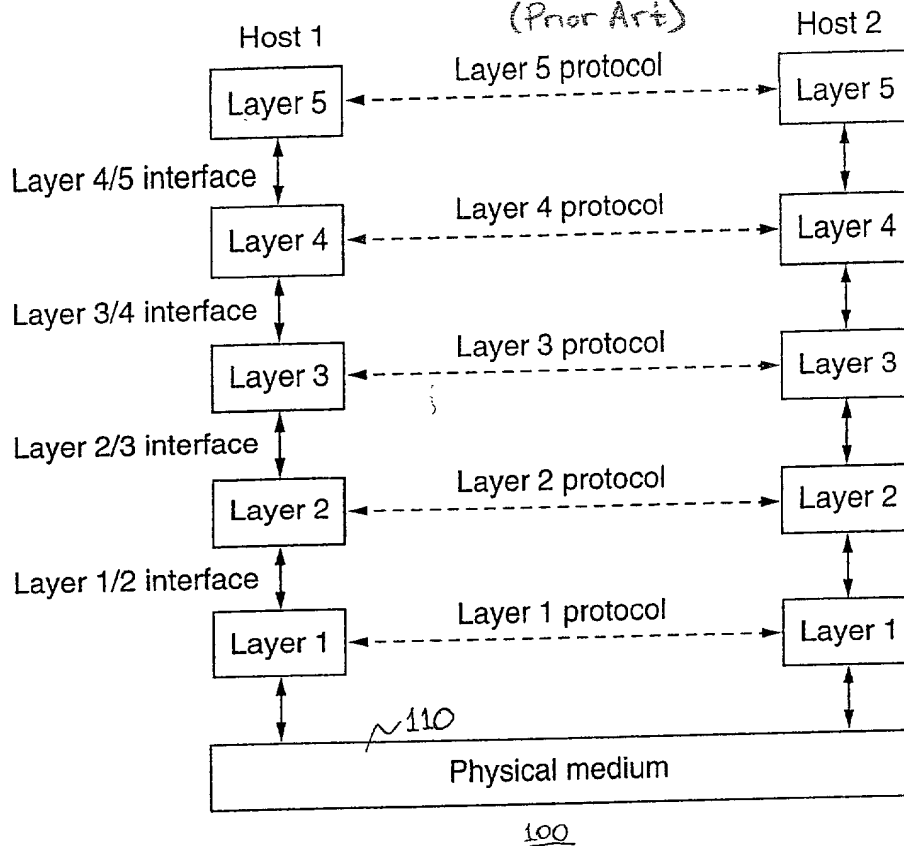


FIGURE 2
(Prior Art)

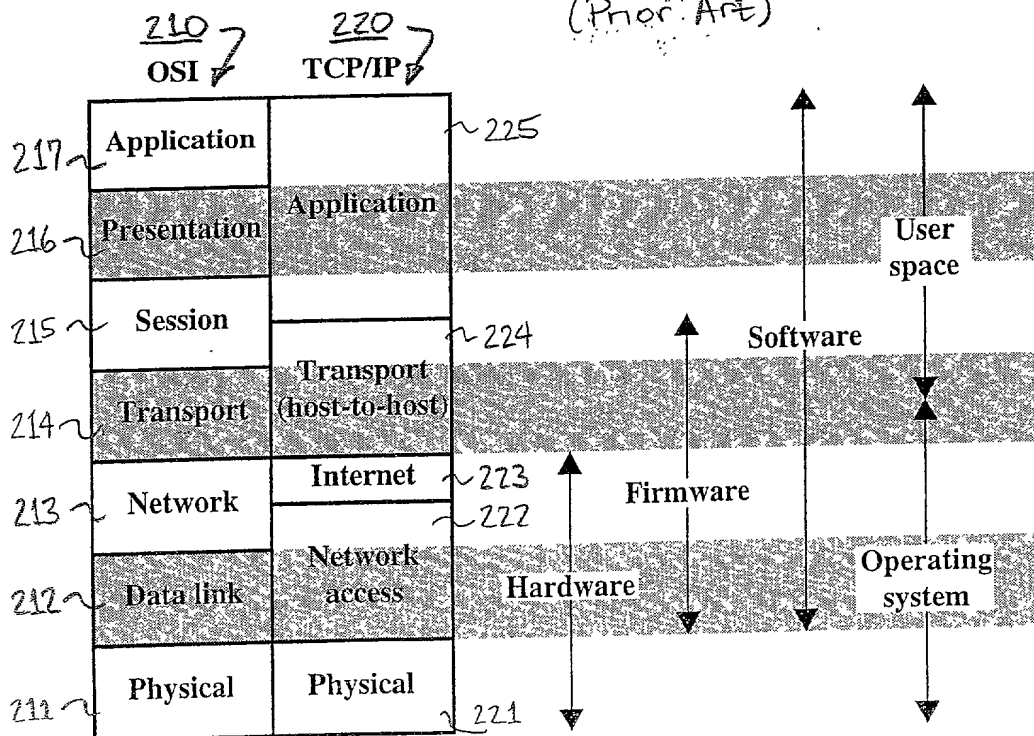
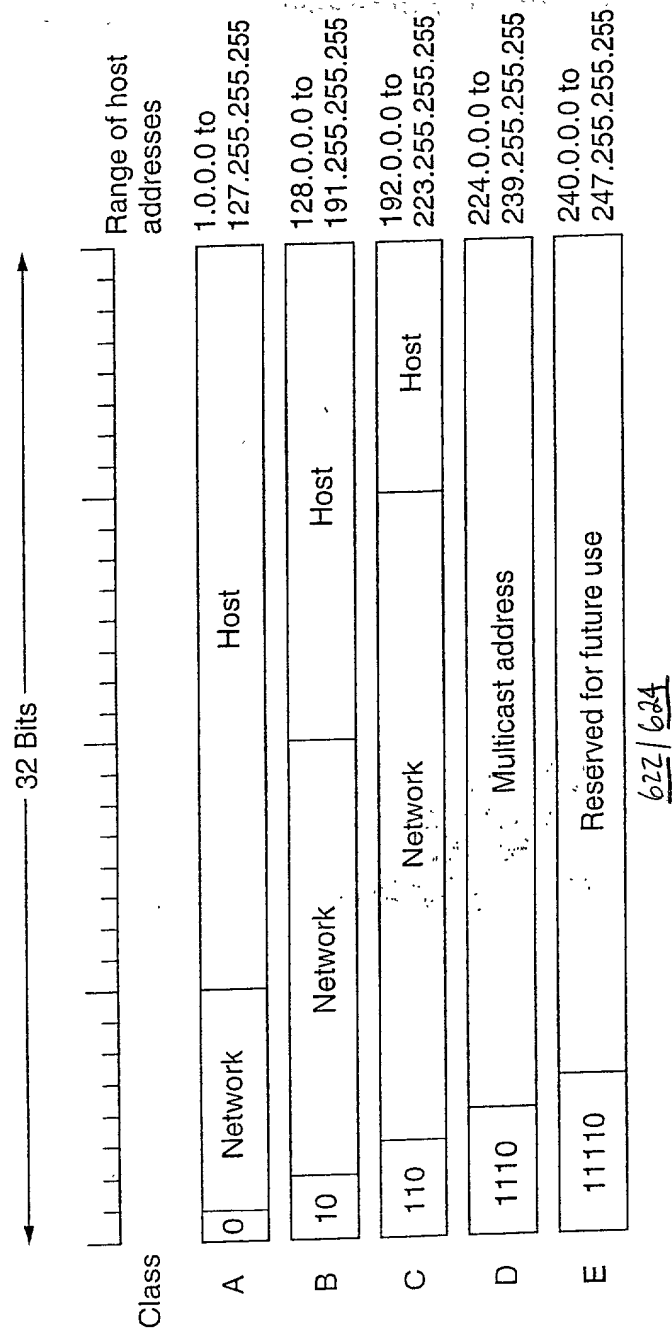


FIGURE 3
(Prior Art)



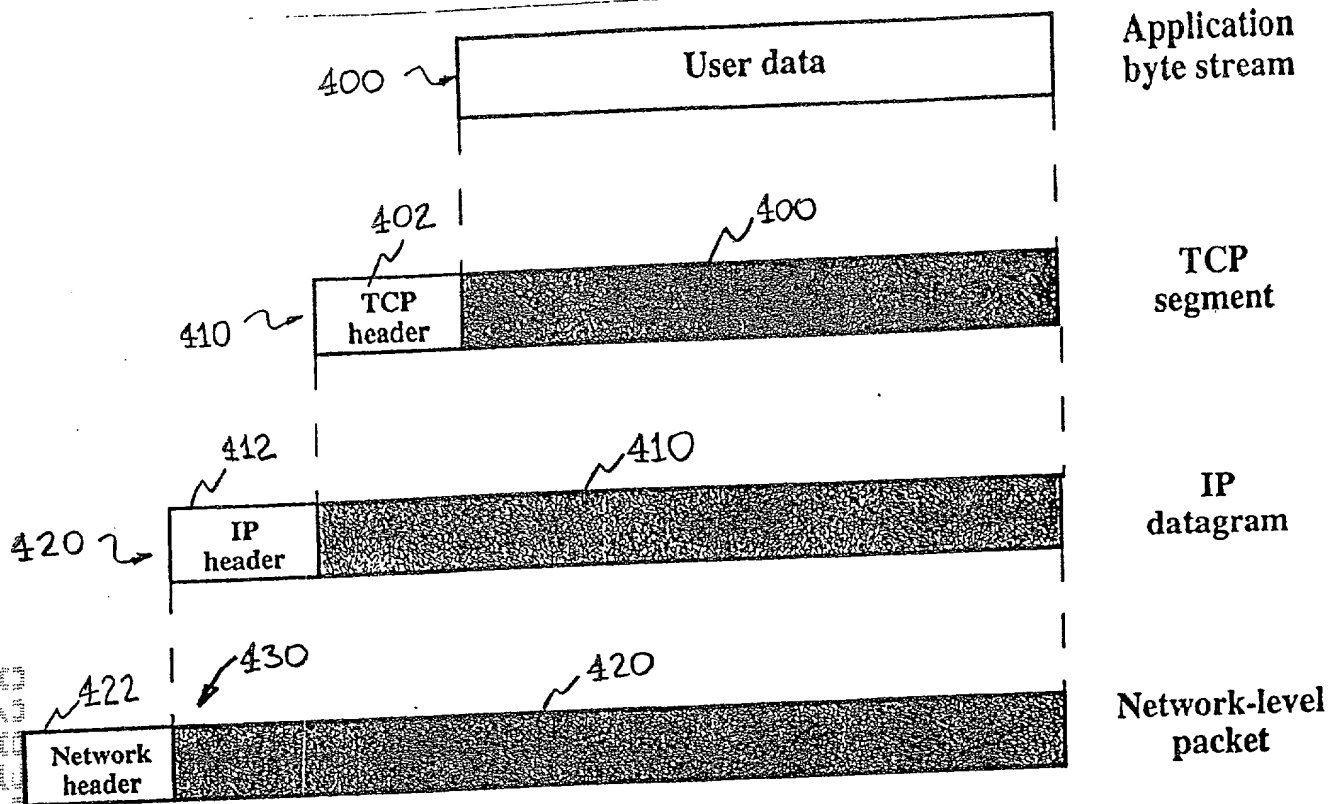


FIGURE 4
(Prior Art)

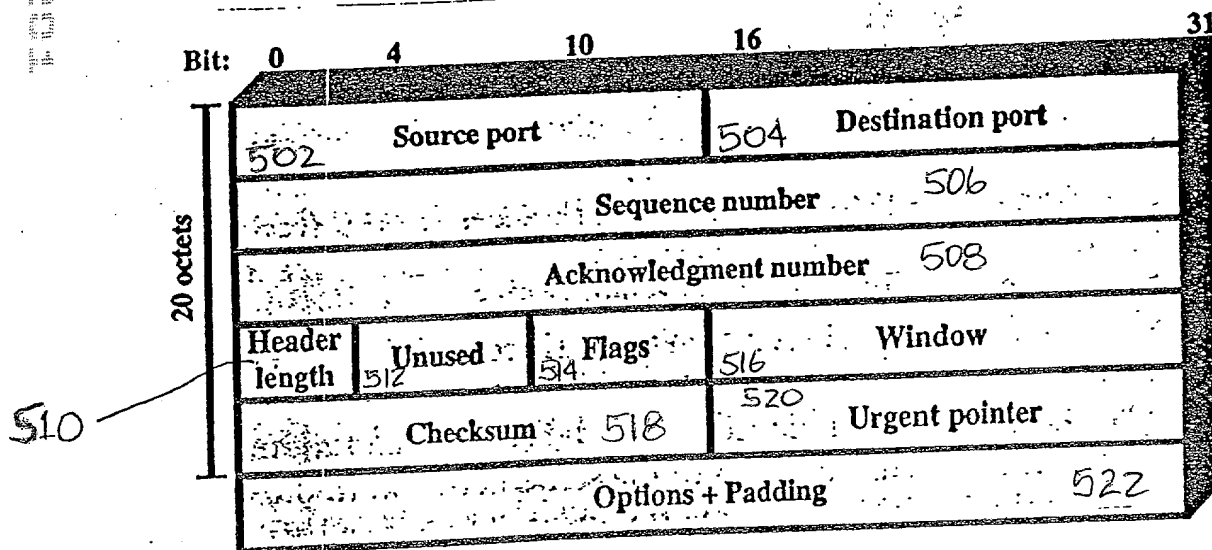


FIGURE 5
(Prior Art)

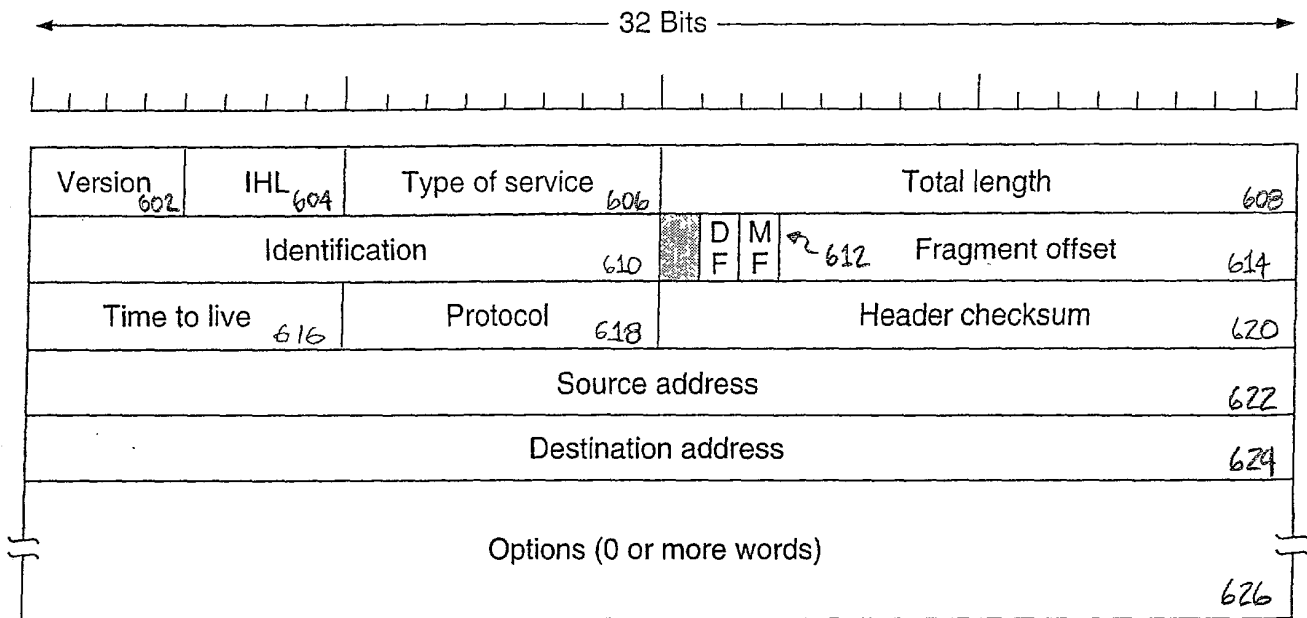


FIGURE 6A

(Prior Art)

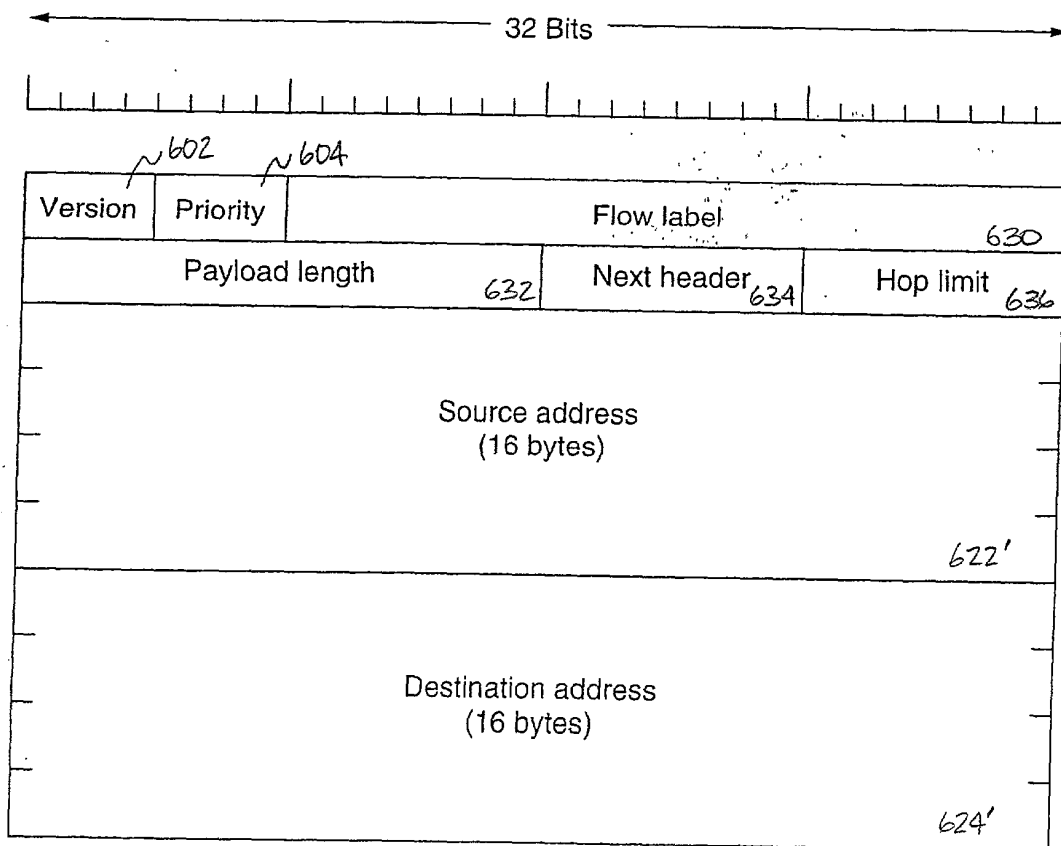


FIGURE 6B

(Prior Art)

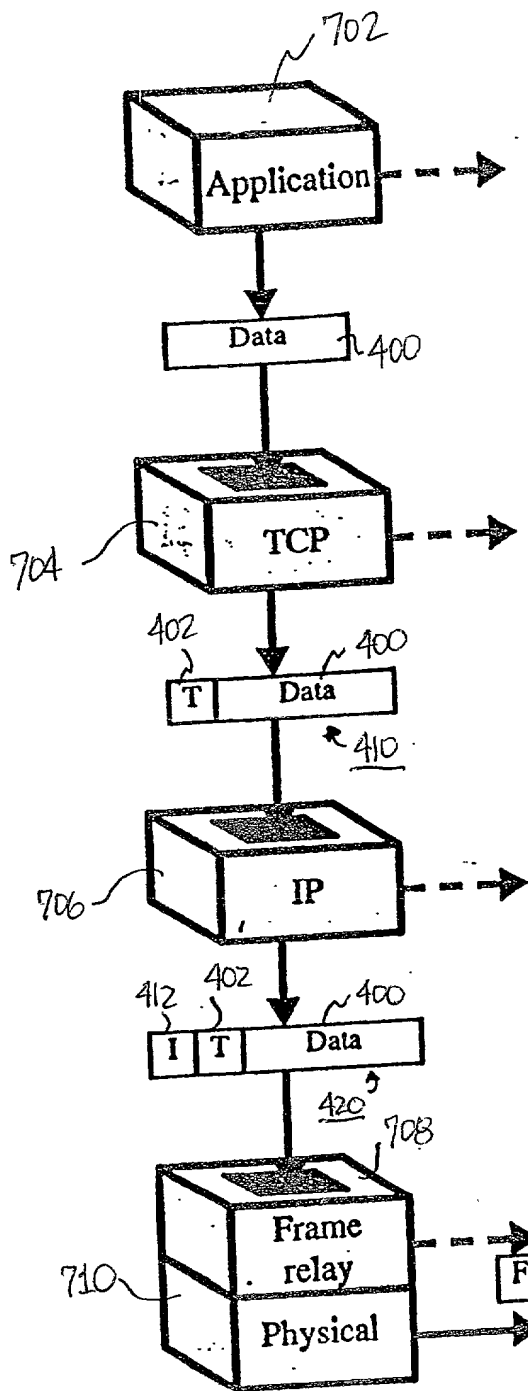


FIGURE 7

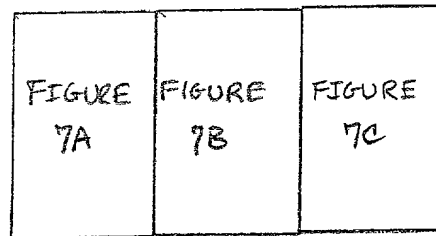


FIGURE 7A
(Prior Art)

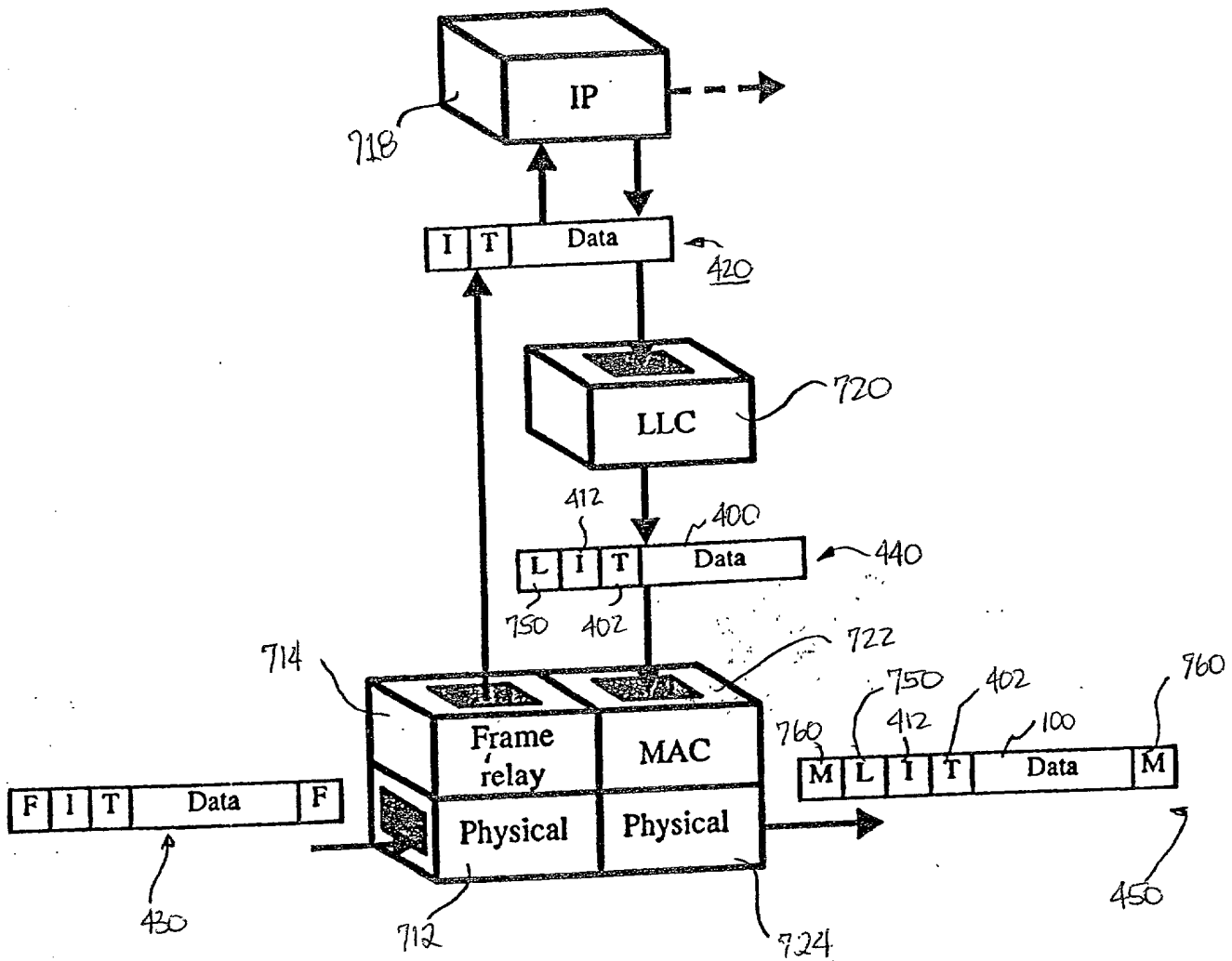
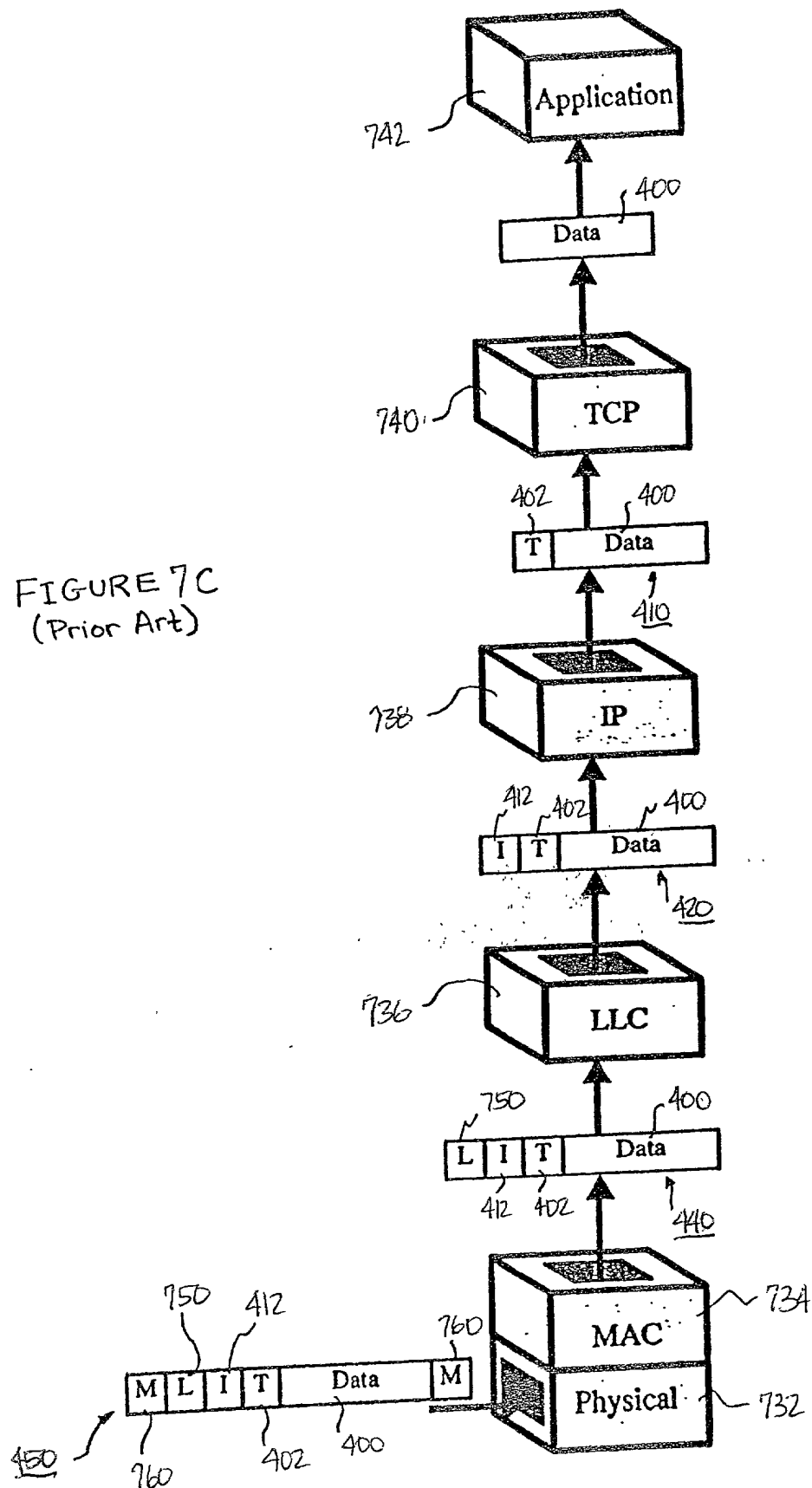


FIGURE 7B

FIGURE 7C
(Prior Art)



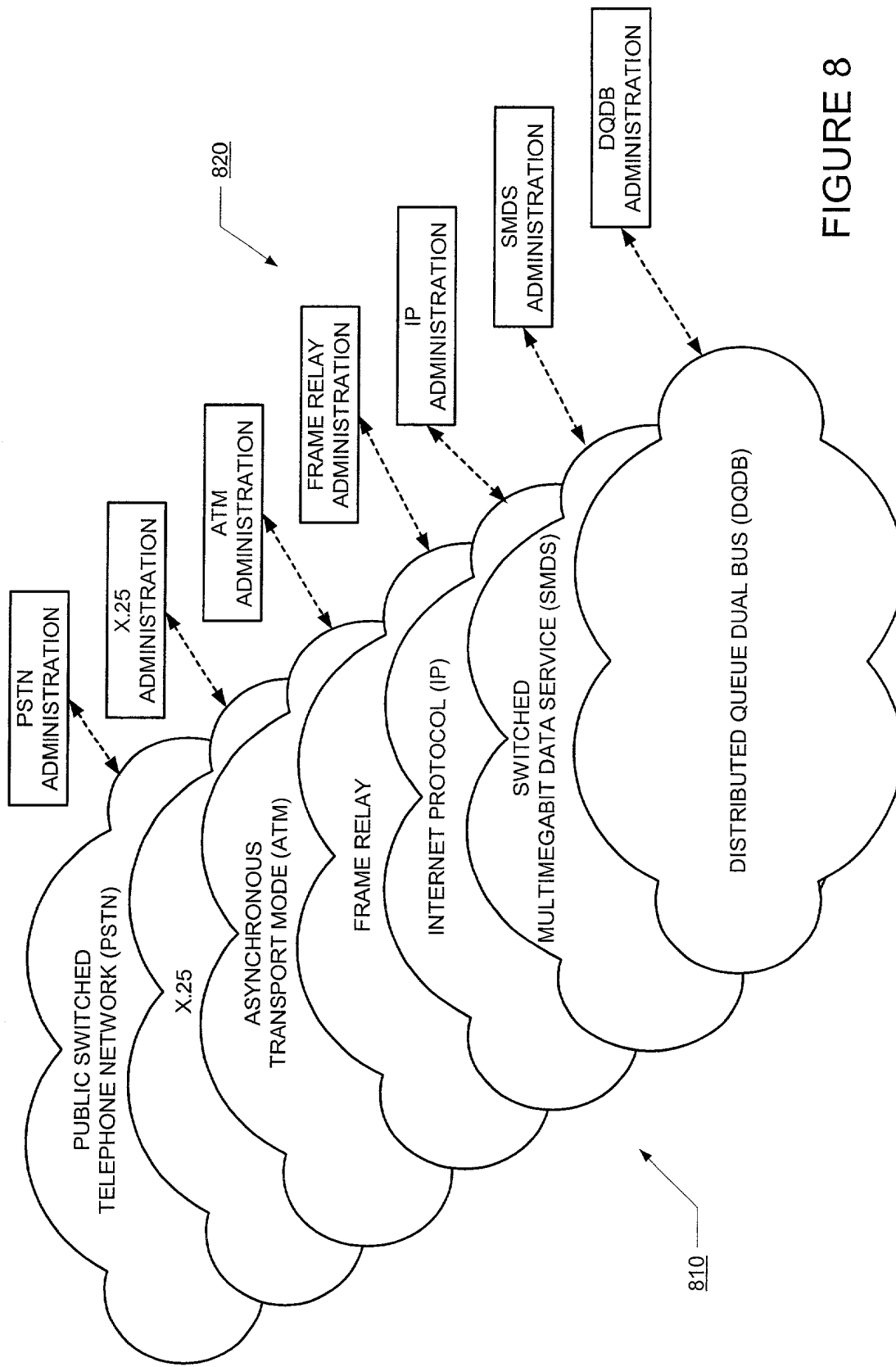


FIGURE 8

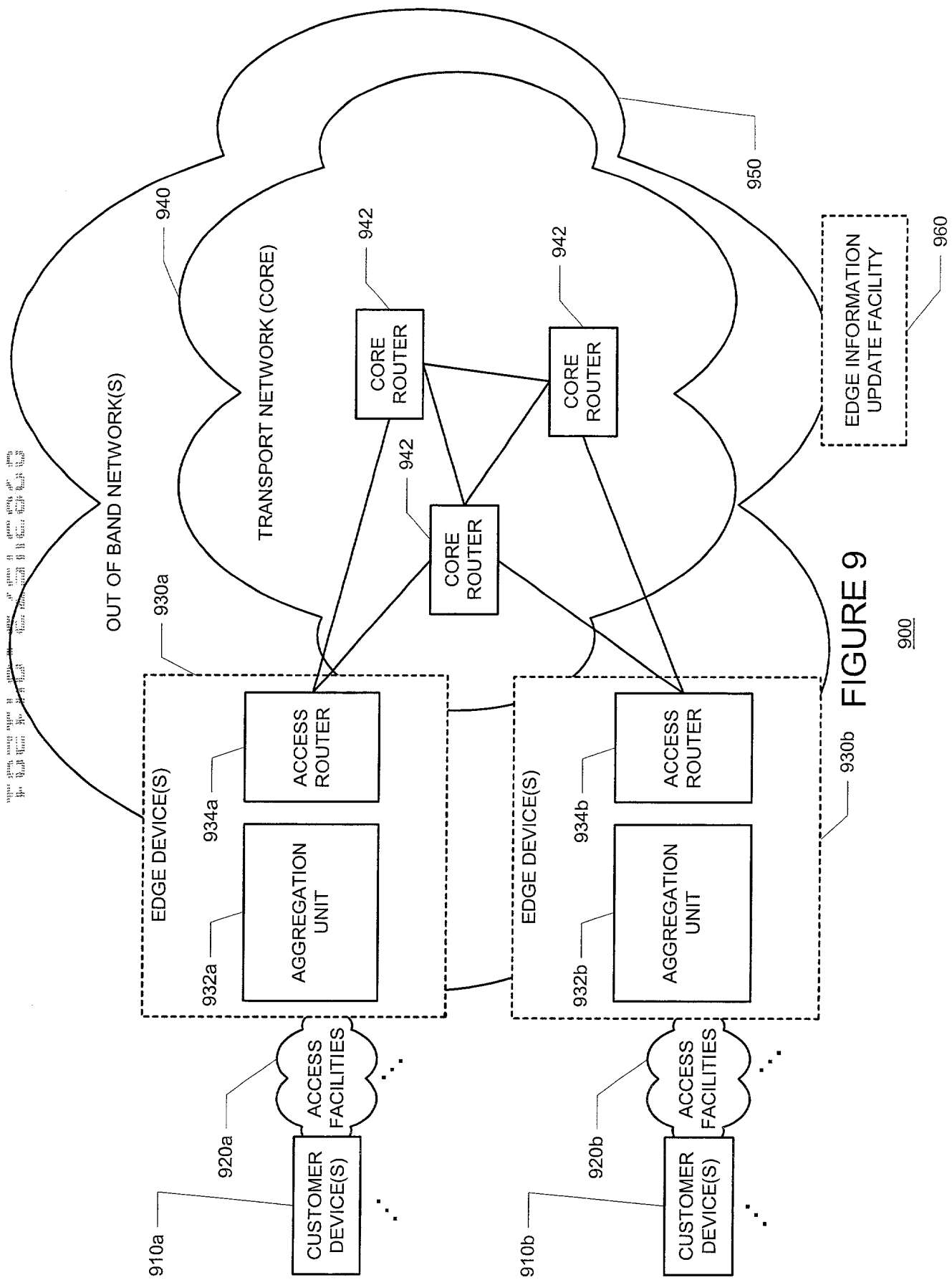


FIGURE 9

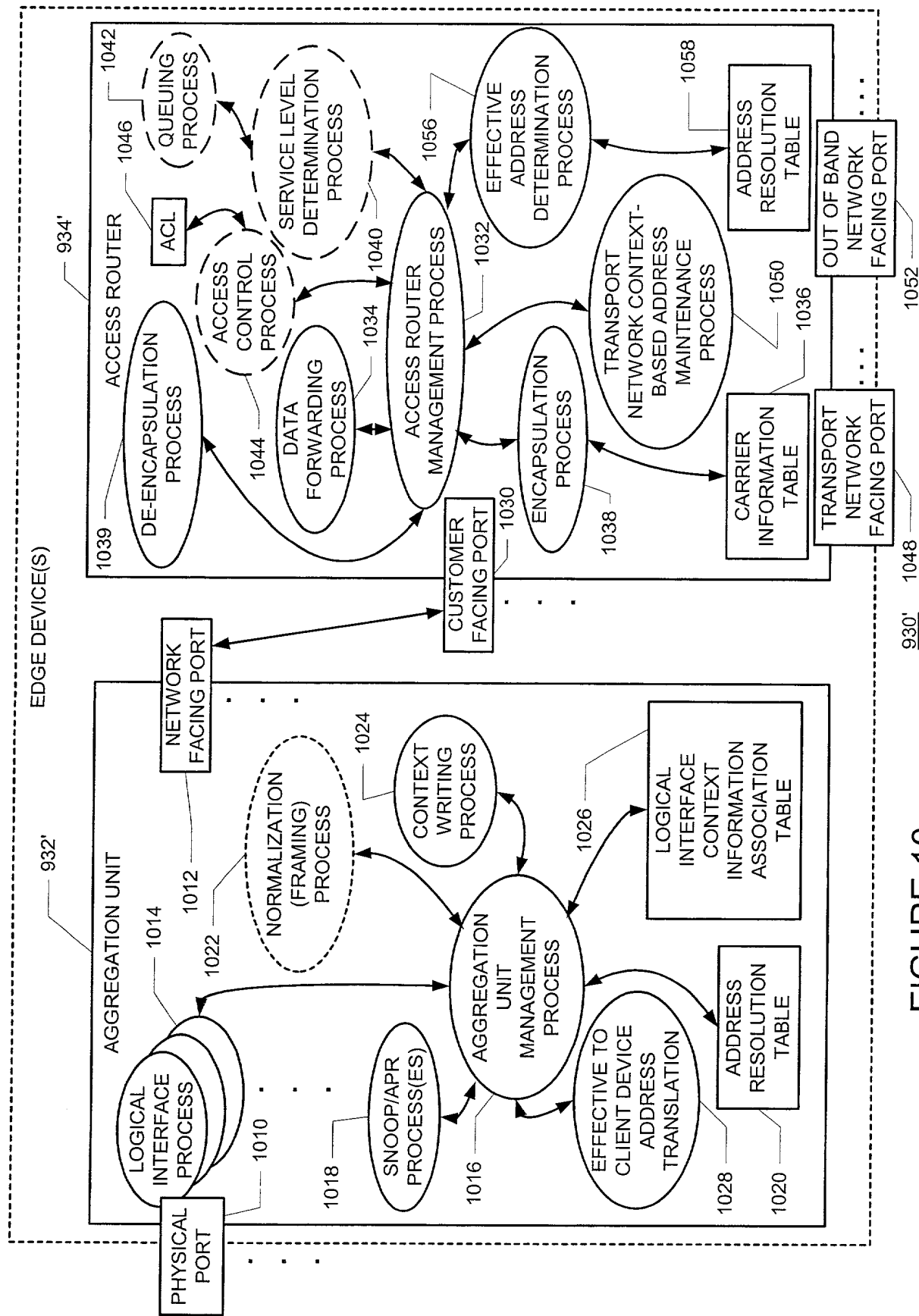
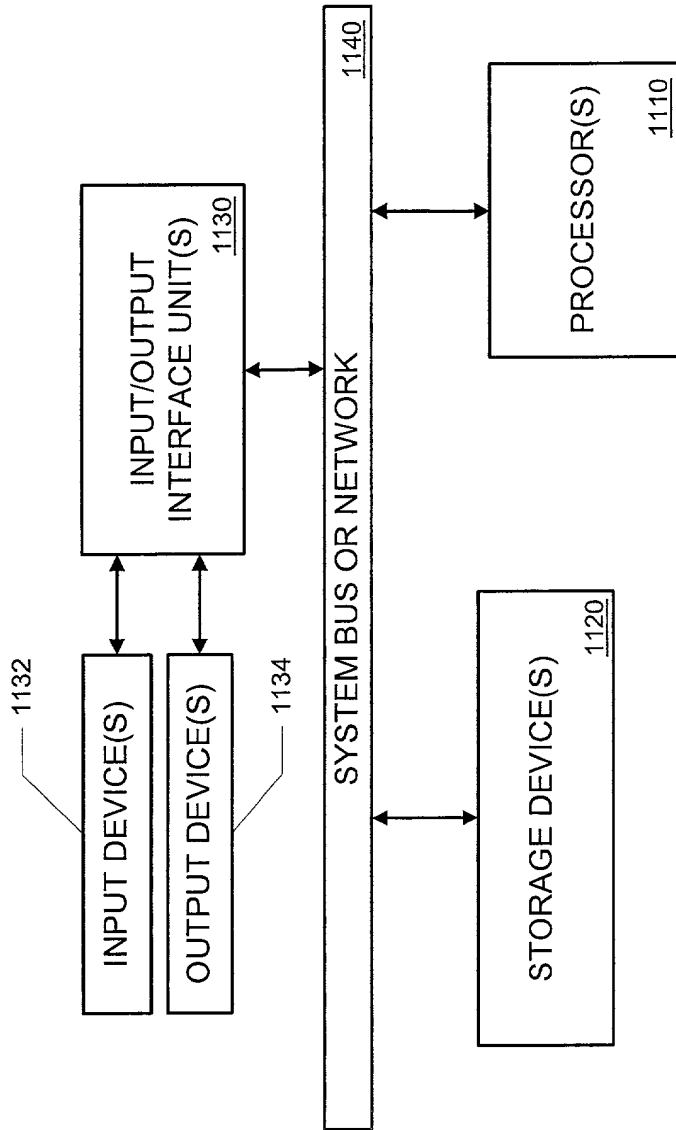


FIGURE 10



1100

FIGURE 11

FIG. 12 is a block diagram of an address resolution table (AU) 1200. The table 1200 is divided into three main sections: 1210a, 1210b, and 1210c. Section 1210a is the header section, section 1210b is the first data section, and section 1210c is the second data section. The table 1200 is used to resolve addresses associated with logical interfaces.

ADDRESS RESOLUTION TABLE (AU)	
LOGICAL INTERFACE ID	(LAYER 2) ADDRESS OF CUSTOMER DEVICE ASSOCIATED WITH LOGICAL INTERFACE
LOGICAL INTERFACE ID	(LAYER 2) ADDRESS OF CUSTOMER DEVICE ASSOCIATED WITH LOGICAL INTERFACE
• • •	• • •
LOGICAL INTERFACE ID	(LAYER 2) ADDRESS OF CUSTOMER DEVICE ASSOCIATED WITH LOGICAL INTERFACE

1210a 1210b 1210c 1020'

FIGURE 12

LOGICAL INTERFACE - CONTEXT INFORMATION ASSOCIATION TABLE	
LOGICAL INTERFACE	CONTEXT INFORMATION ASSOCIATED WITH LOGICAL INTERFACE
LOGICAL INTERFACE	CONTEXT INFORMATION ASSOCIATED WITH LOGICAL INTERFACE
• • •	• • •
LOGICAL INTERFACE	CONTEXT INFORMATION ASSOCIATED WITH LOGICAL INTERFACE

1310a 1310b 1310c 1026'

FIGURE 13

CARRIER INFORMATION TABLE	
AT LEAST A PART OF THE CONTEXT INFORMATION + (LAYER 3) DESTINATION ADDRESS	EGRESS ACCESS ROUTER LAYER 3 ADDRESS
AT LEAST A PART OF THE CONTEXT INFORMATION + (LAYER 3) DESTINATION ADDRESS	EGRESS ACCESS ROUTER LAYER 3 ADDRESS
.	.
.	.
.	.
AT LEAST A PART OF THE CONTEXT INFORMATION + (LAYER 3) DESTINATION ADDRESS	EGRESS ACCESS ROUTER LAYER 3 ADDRESS

Figure 14

ADDRESS RESOLUTION TABLE (AR)	
AT LEAST A PART OF THE CONTEXT INFORMATION + (LAYER 3) DESTINATION ADDRESS	EFFECTIVE LOGICAL INTERFACE ADDRESS
AT LEAST A PART OF THE CONTEXT INFORMATION + (LAYER 3) DESTINATION ADDRESS	EFFECTIVE LOGICAL INTERFACE ADDRESS
.	.
.	.
.	.
AT LEAST A PART OF THE CONTEXT INFORMATION + (LAYER 3) DESTINATION ADDRESS	EFFECTIVE LOGICAL INTERFACE ADDRESS

FIGURE 15

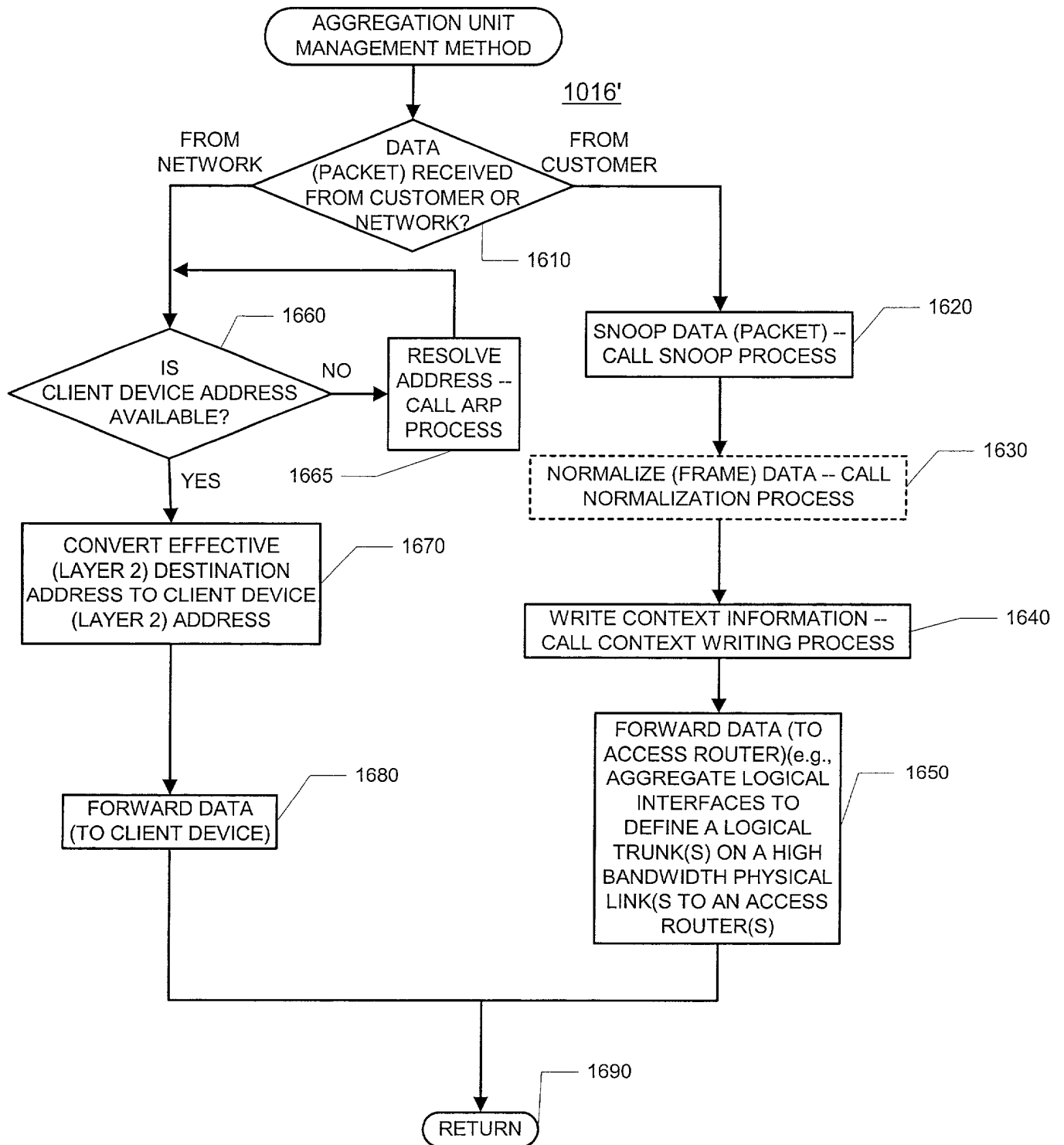


FIGURE 16

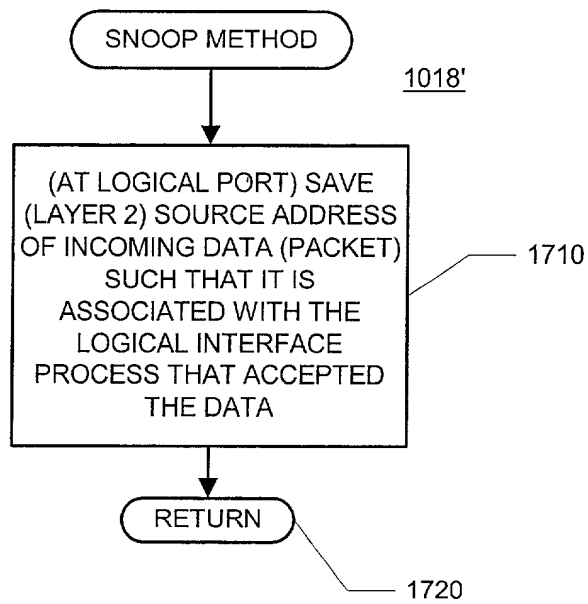


FIGURE 17

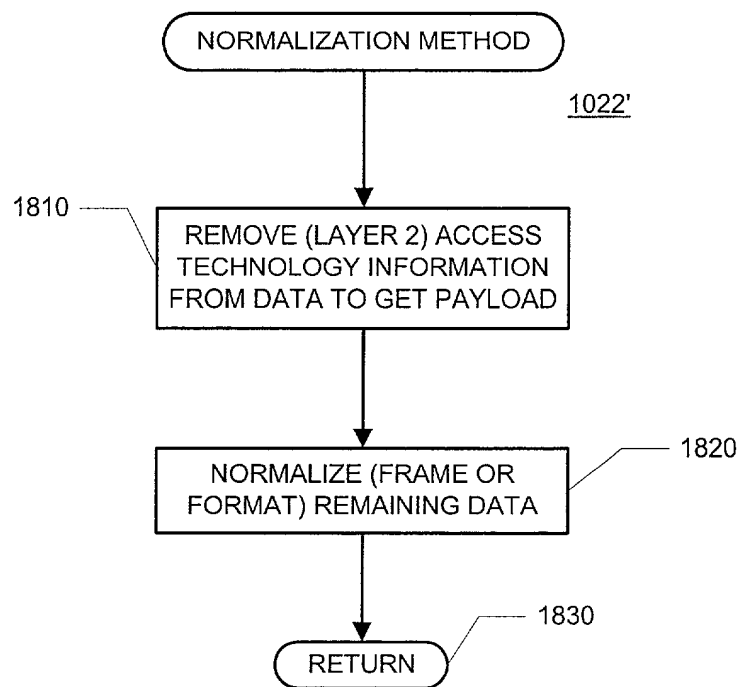


FIGURE 18

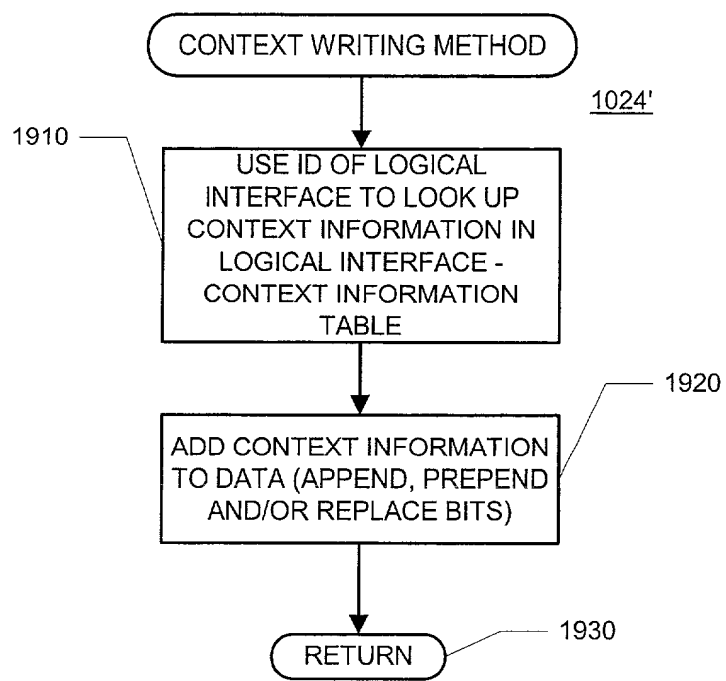


FIGURE 19

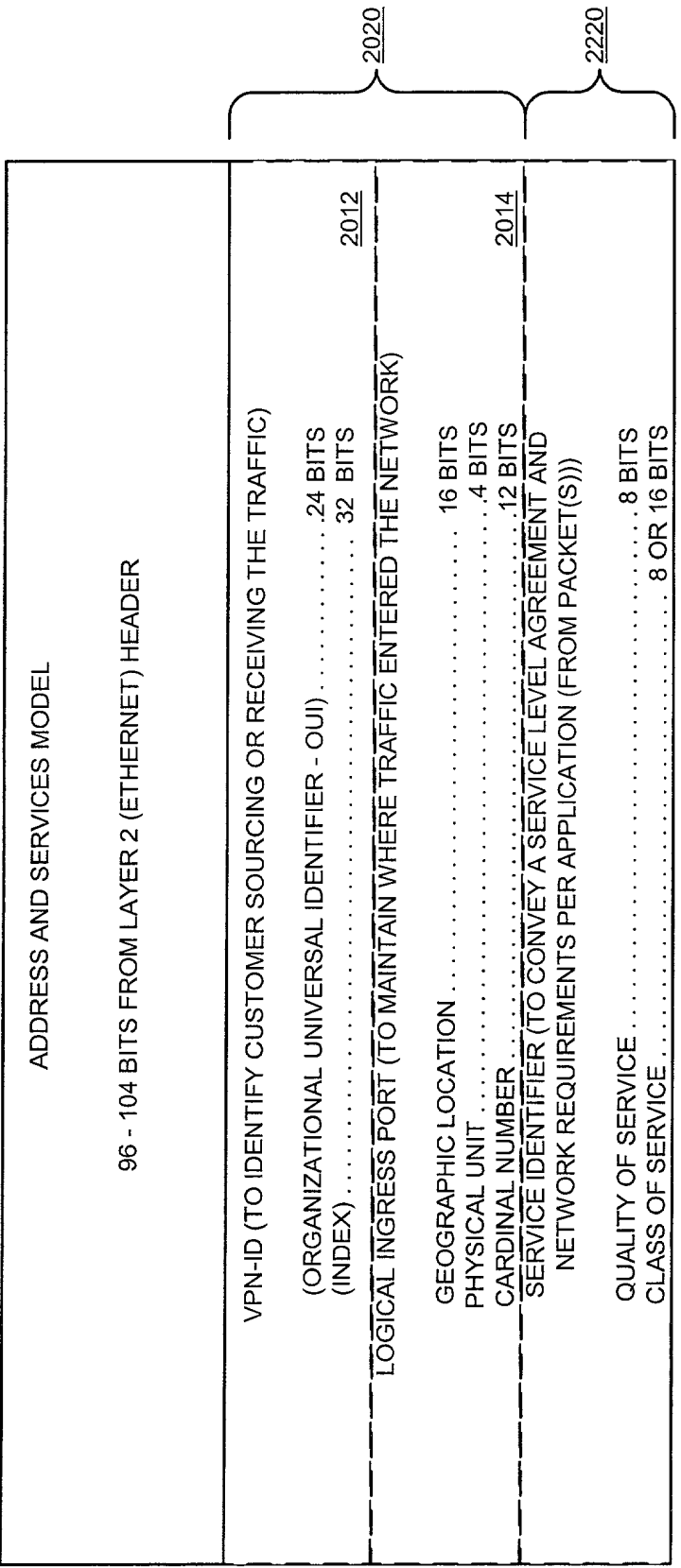


FIGURE 20

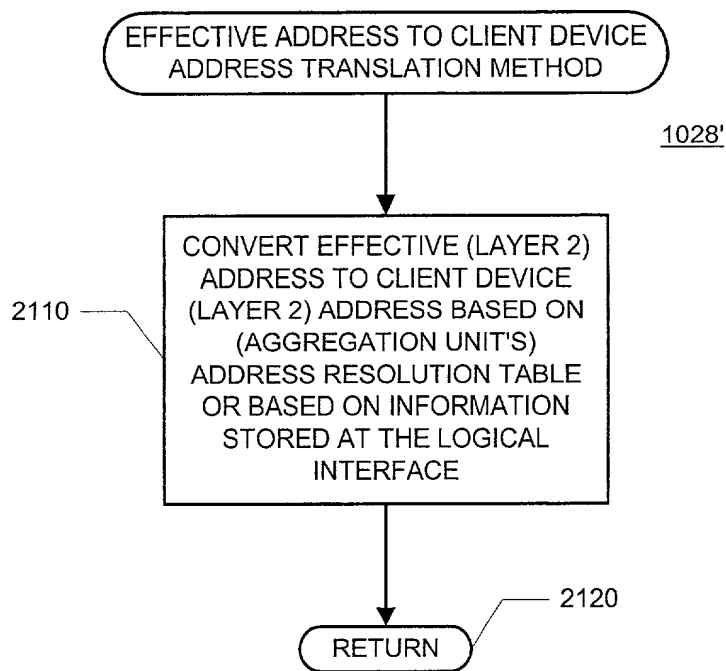


FIGURE 21

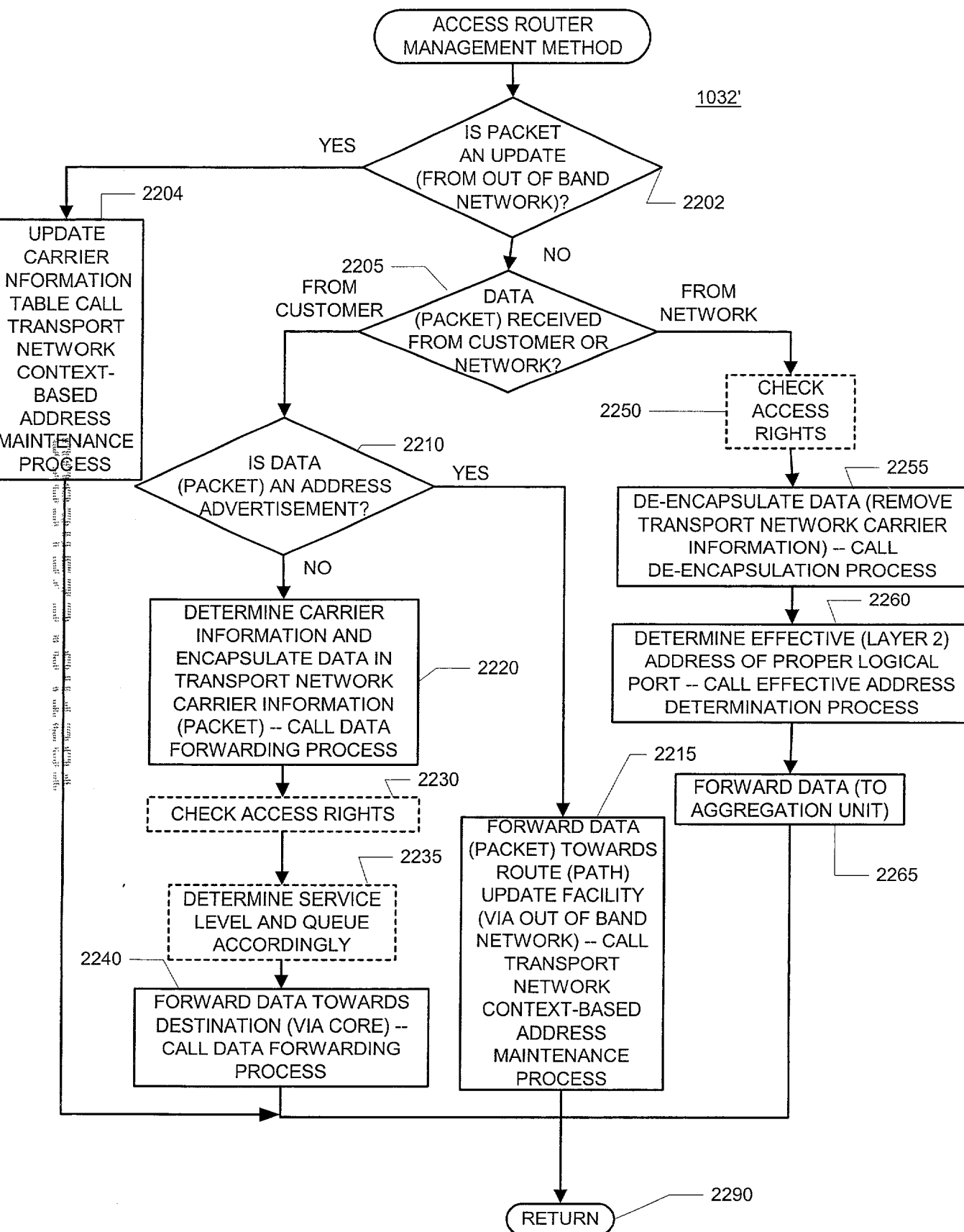


FIGURE 22

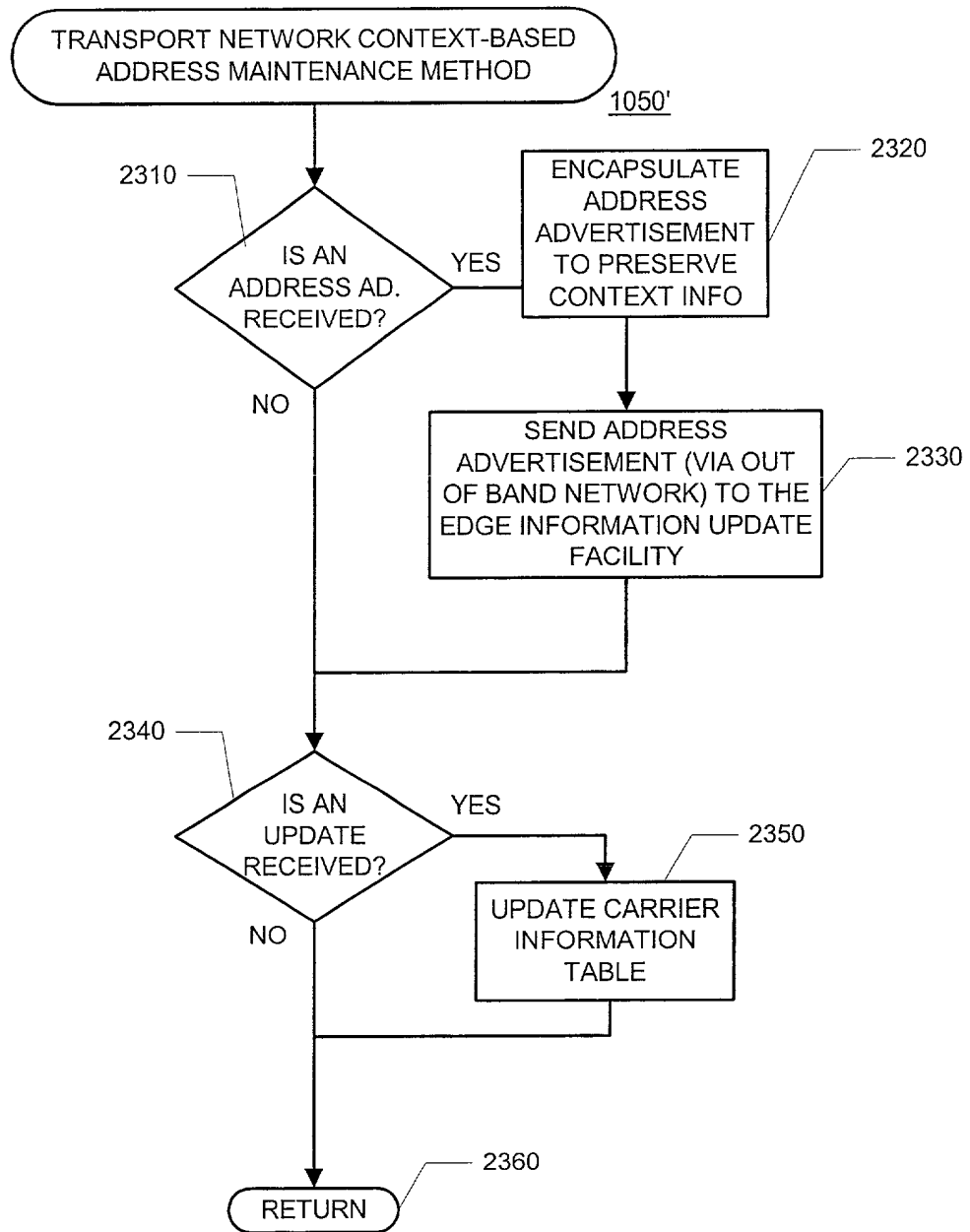


FIGURE 23

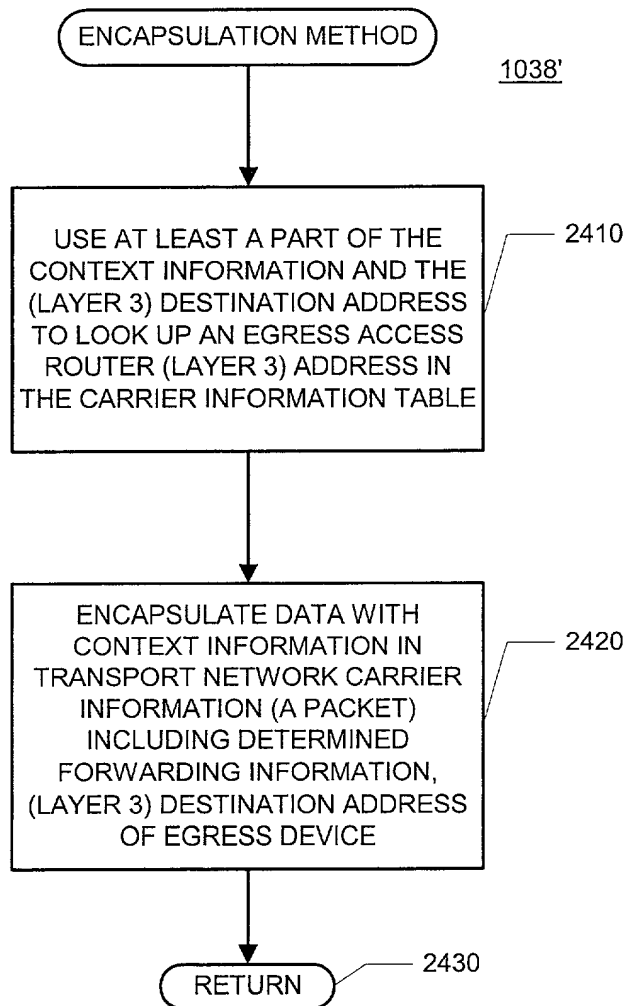


FIGURE 24

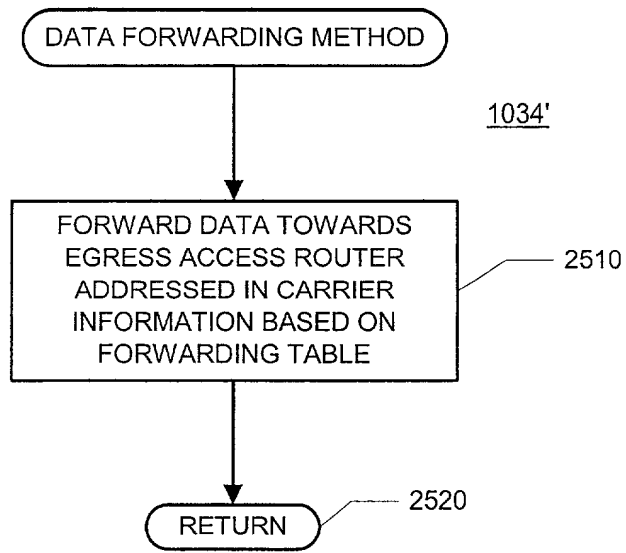


FIGURE 25

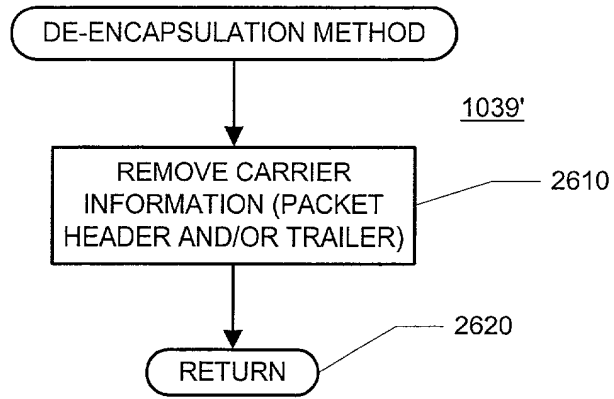


FIGURE 26

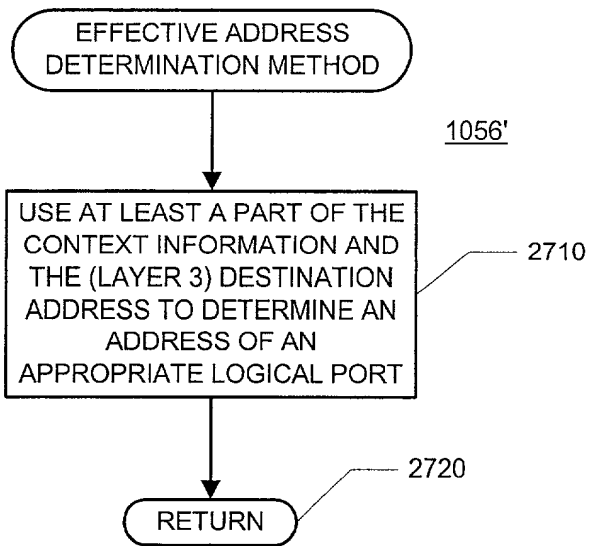


FIGURE 27

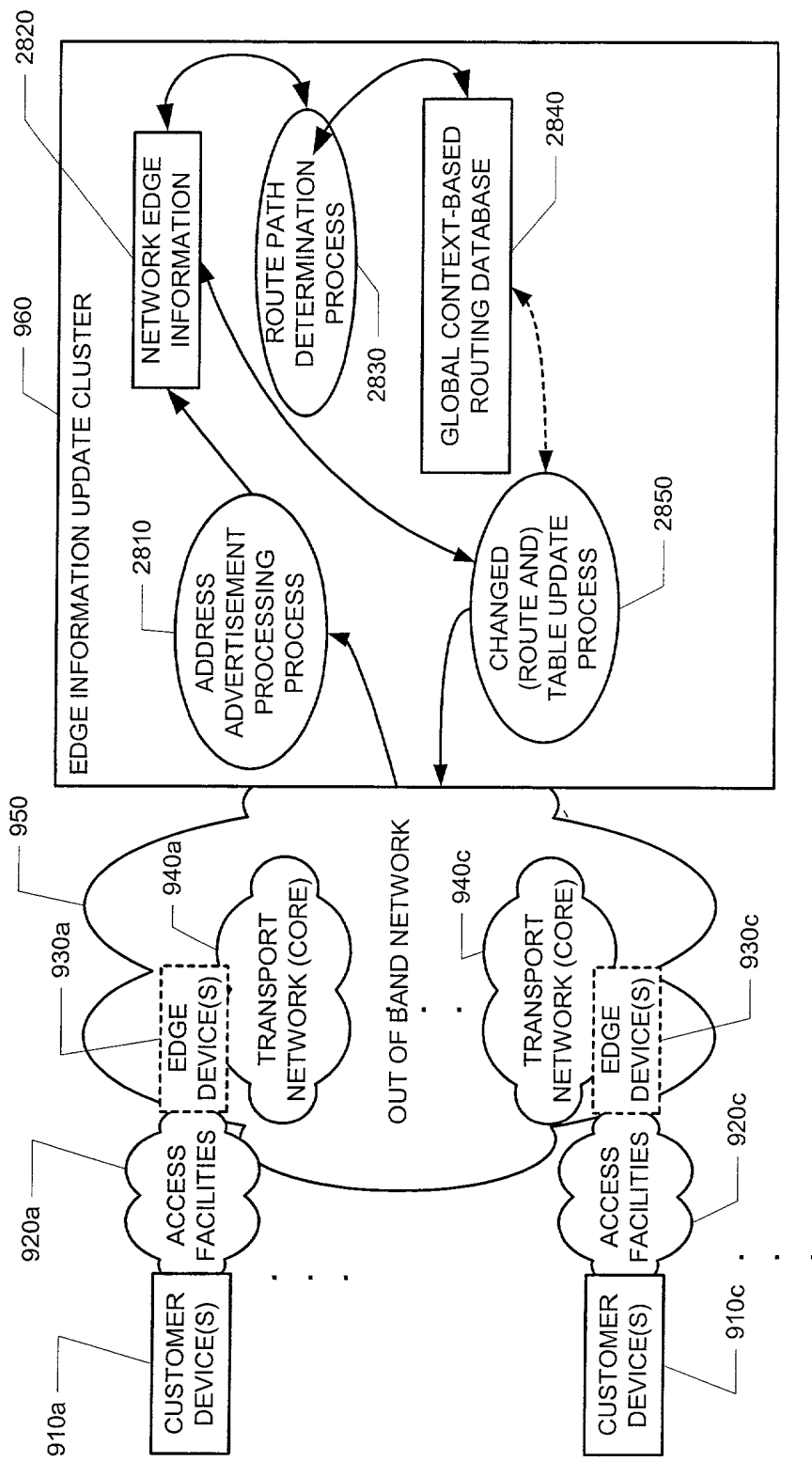


FIGURE 28

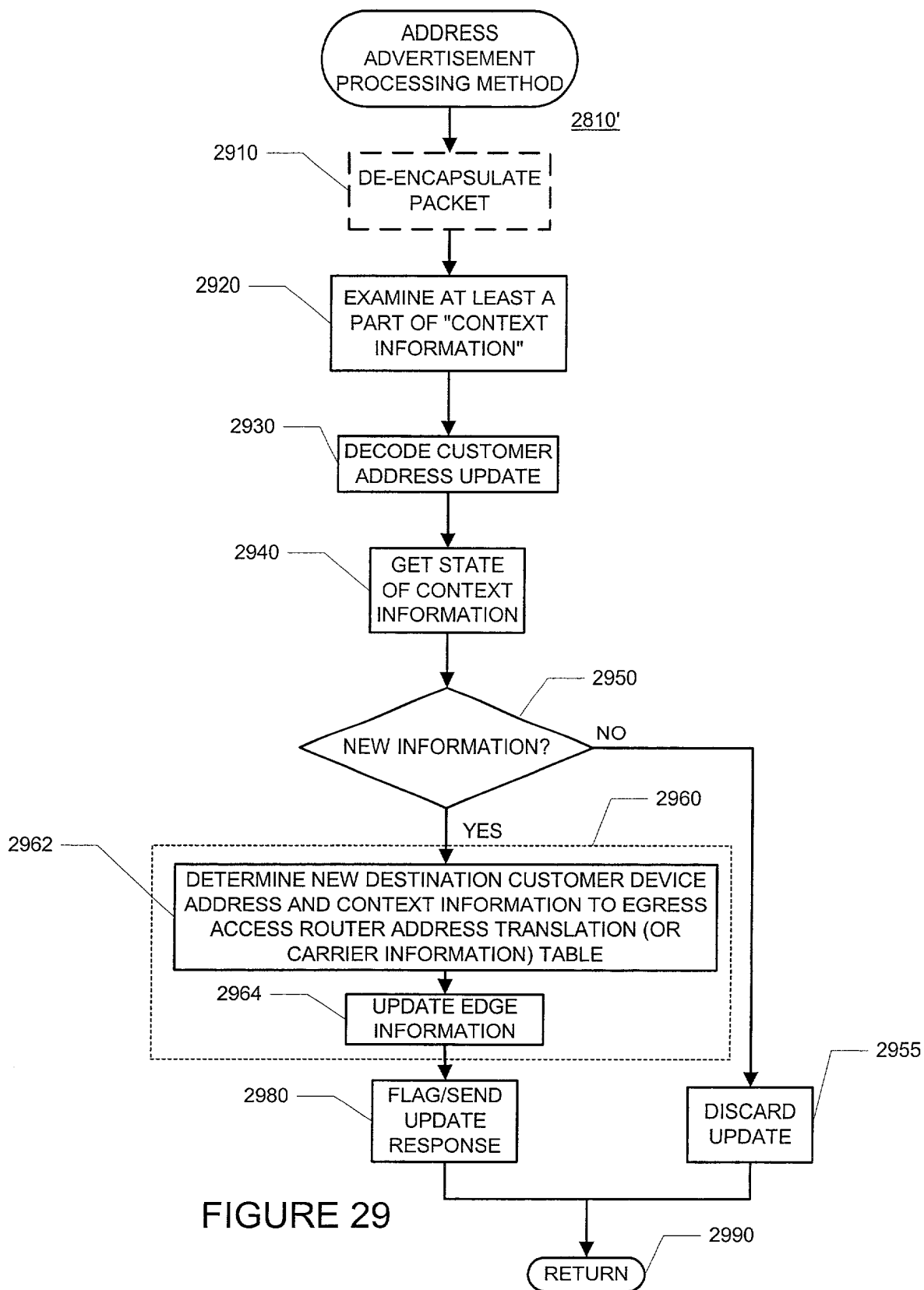
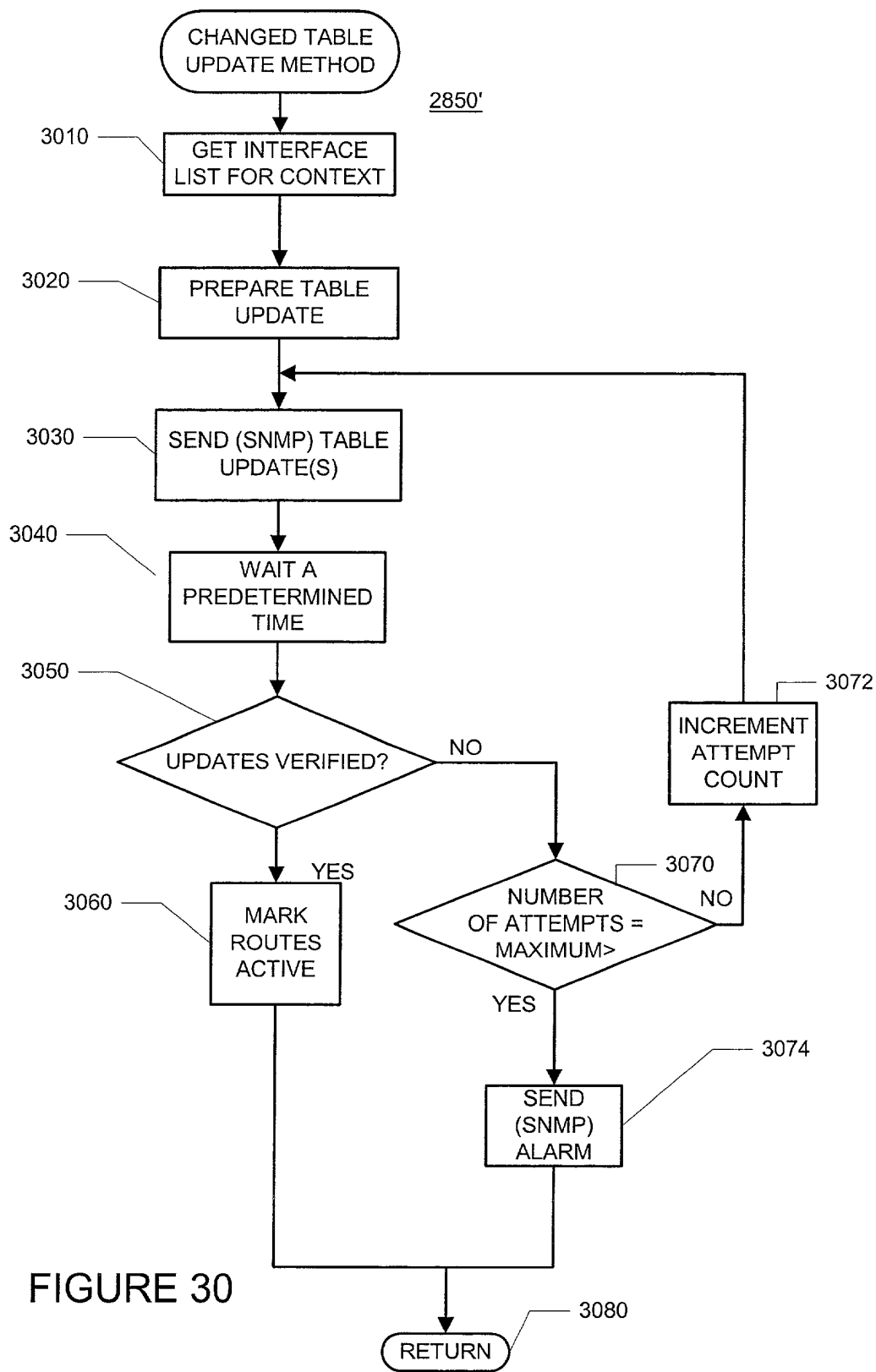


FIGURE 29



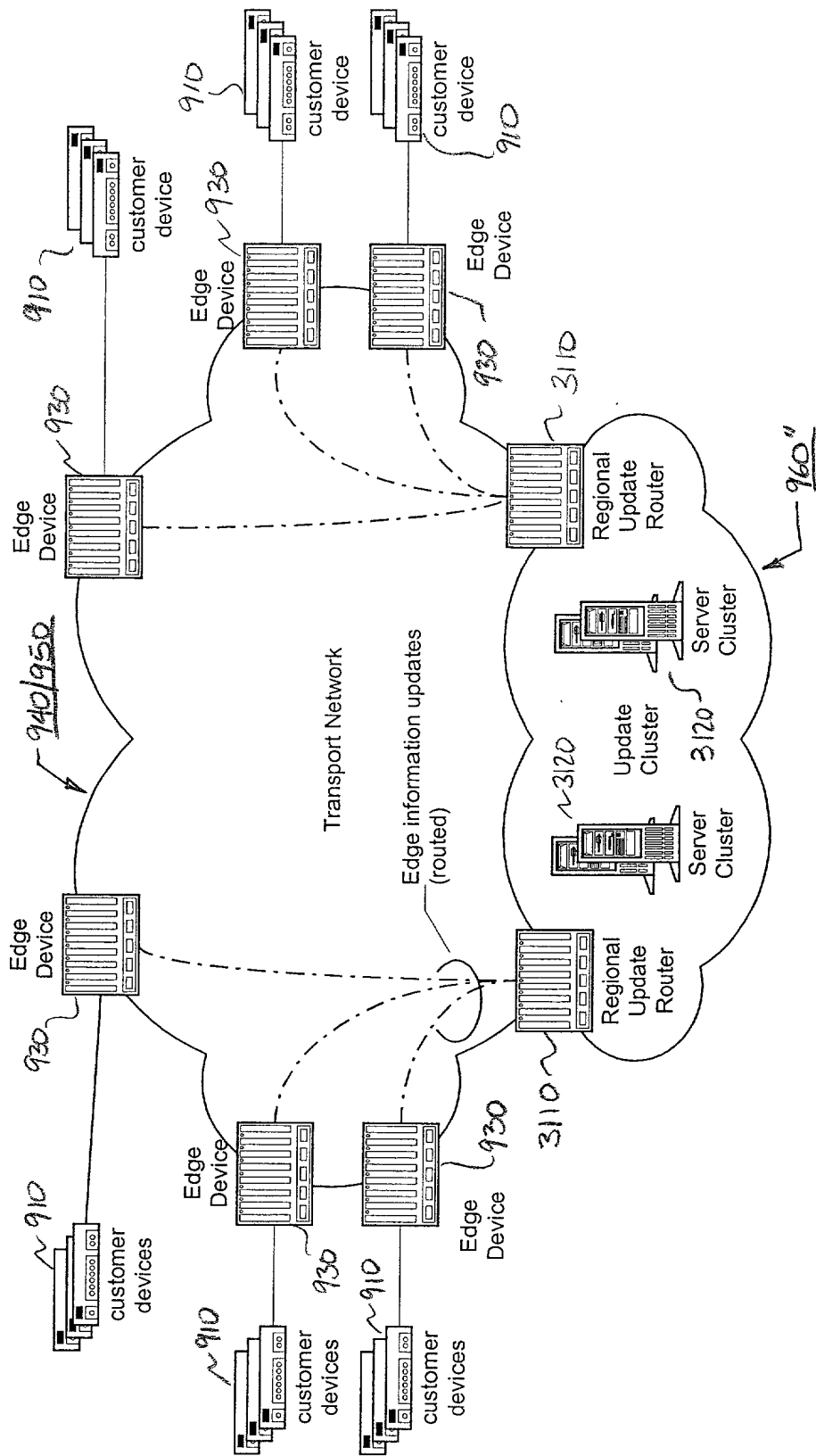


FIGURE 31

FIGURE 32

CARRIER INFORMATION TABLE						
VPN-ID-OUI	VPN-ID-INDEX	CLIENT NETWORK ADDRESS	SUBNET MASK	EGRESS AR ADDRESS	ORIGINATING AR ADDRESS	STATUS FLAG
.
.
.
3210	3220 3230	3200	3240	3250	3260	3270

FIGURE 33

CONTEXT-BASED ADDRESS RESOLUTION TABLE			
VPN-ID-OUI	VPN-ID-INDEX	CLIENT NETWORK ADDRESS	CLIENT LAYER 2 (MAC) ADDRESS
.	.	.	.
.	.	.	.
.	.	.	.
3310	3320 3300	3330	3340 3350

FIGURE 34

NETWORK EDGE INFORMATION				
INGRESS AR ADDRESS	VPN-OUI	VPN-INDEX	CLIENT LAYER 3 ADDRESS	LOGICAL INGRESS PORT
.
.
.
3410	3420	3430	3440 3450 2820'	3460 3470

FIGURE 35

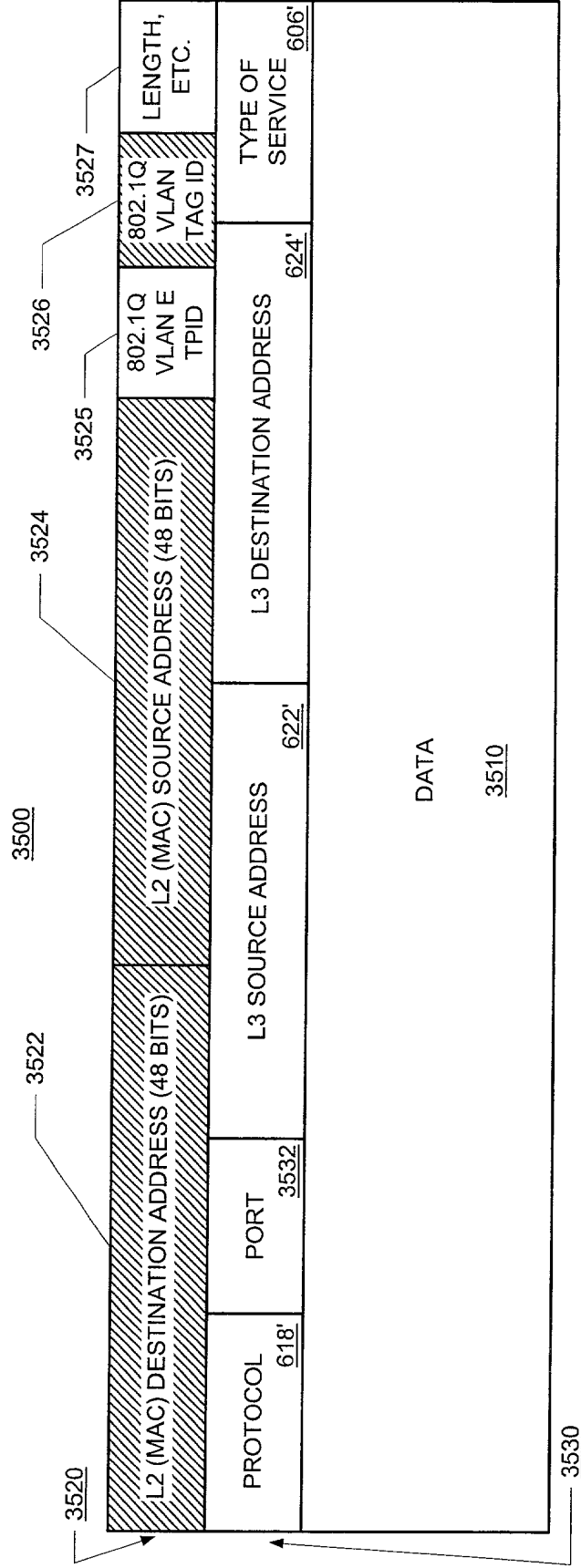


FIGURE 36

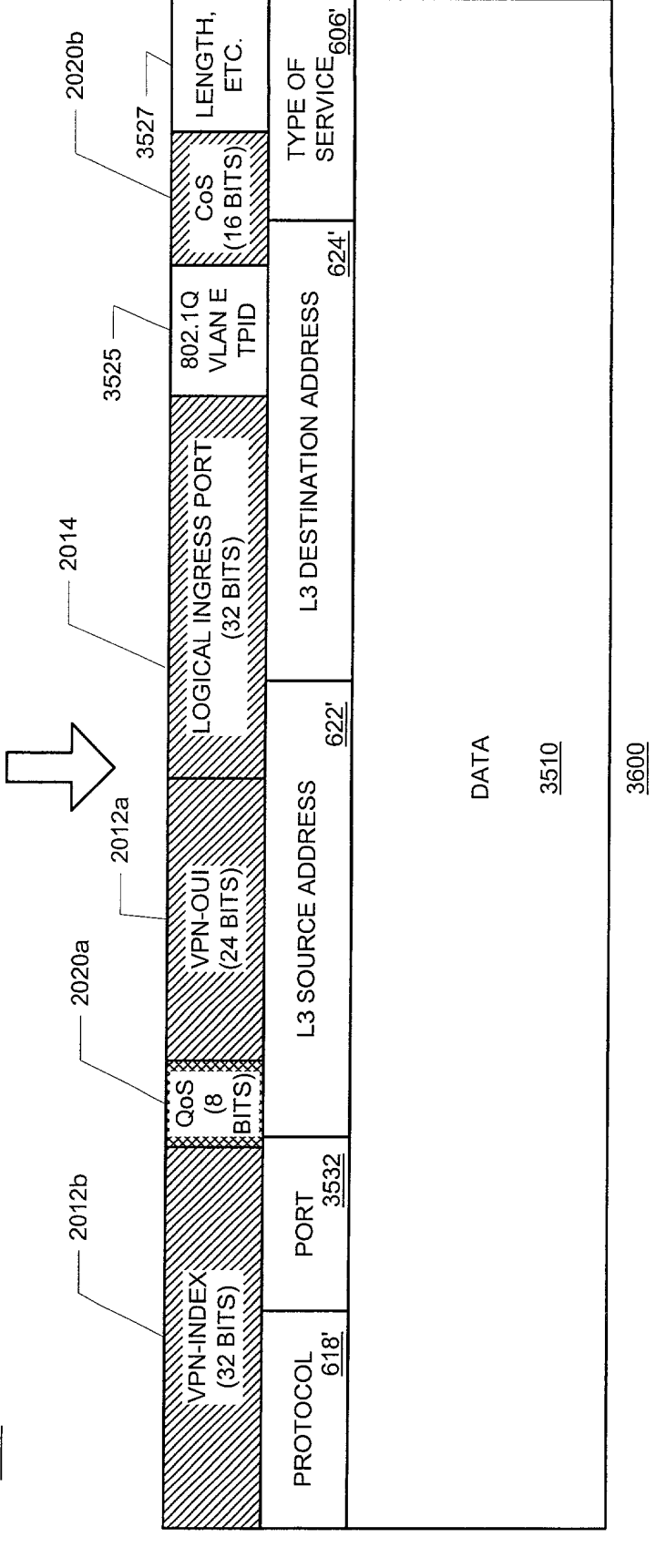
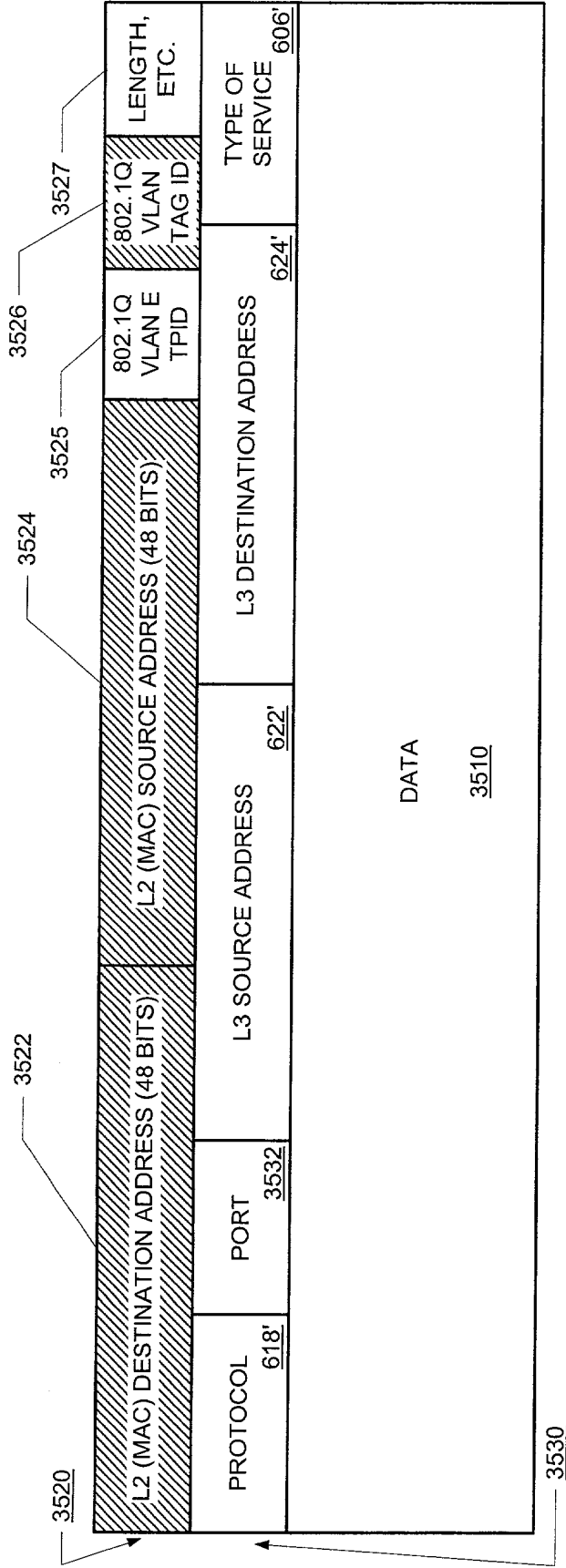
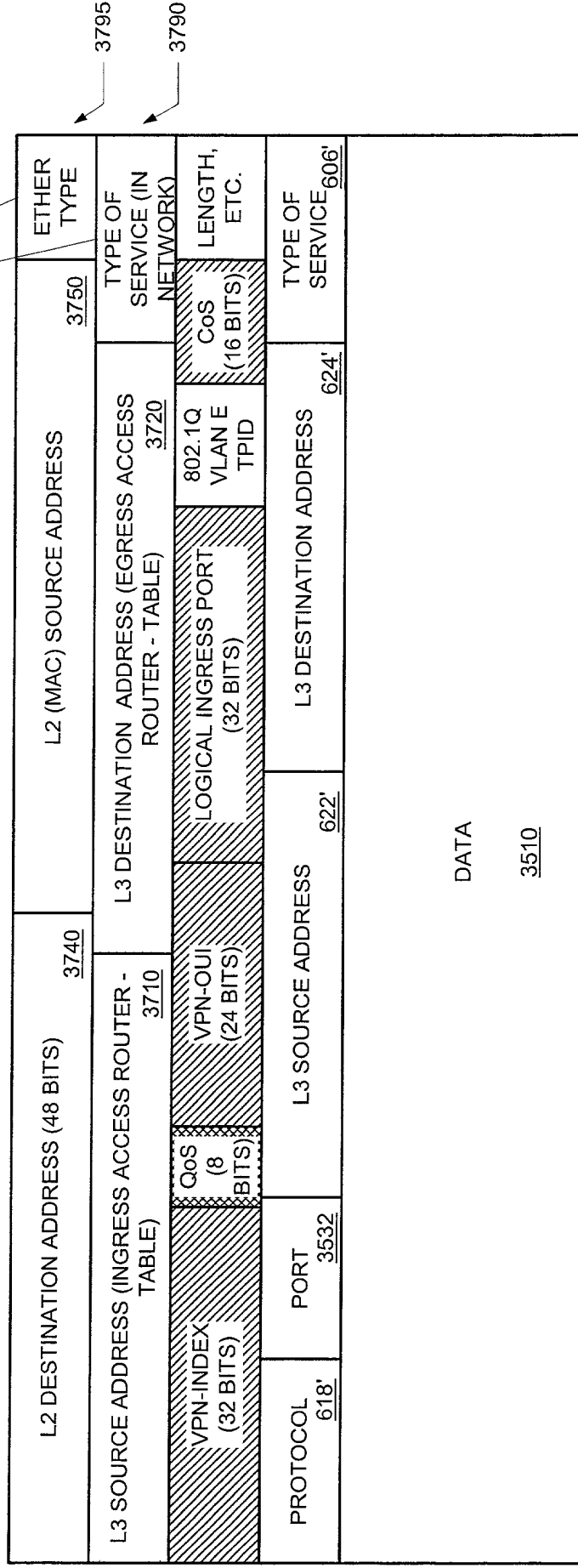


FIGURE 37
3700



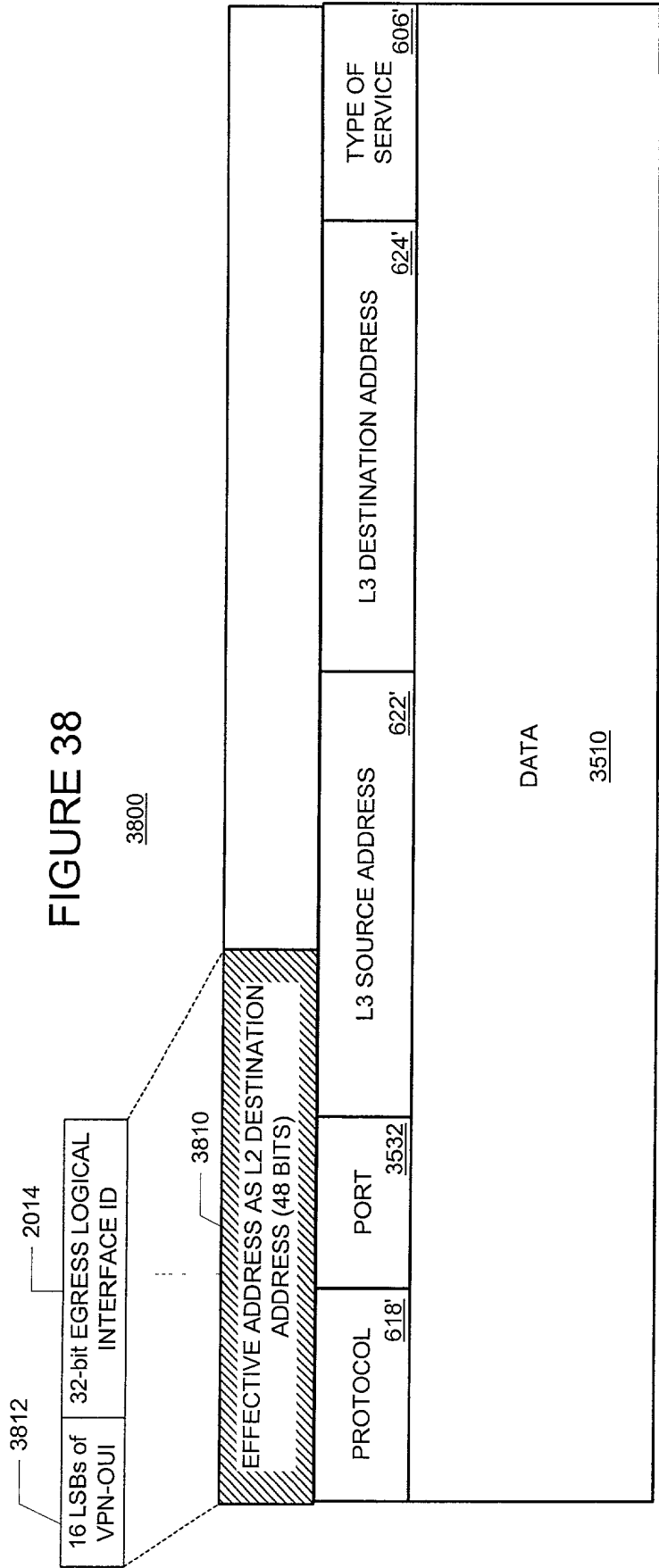
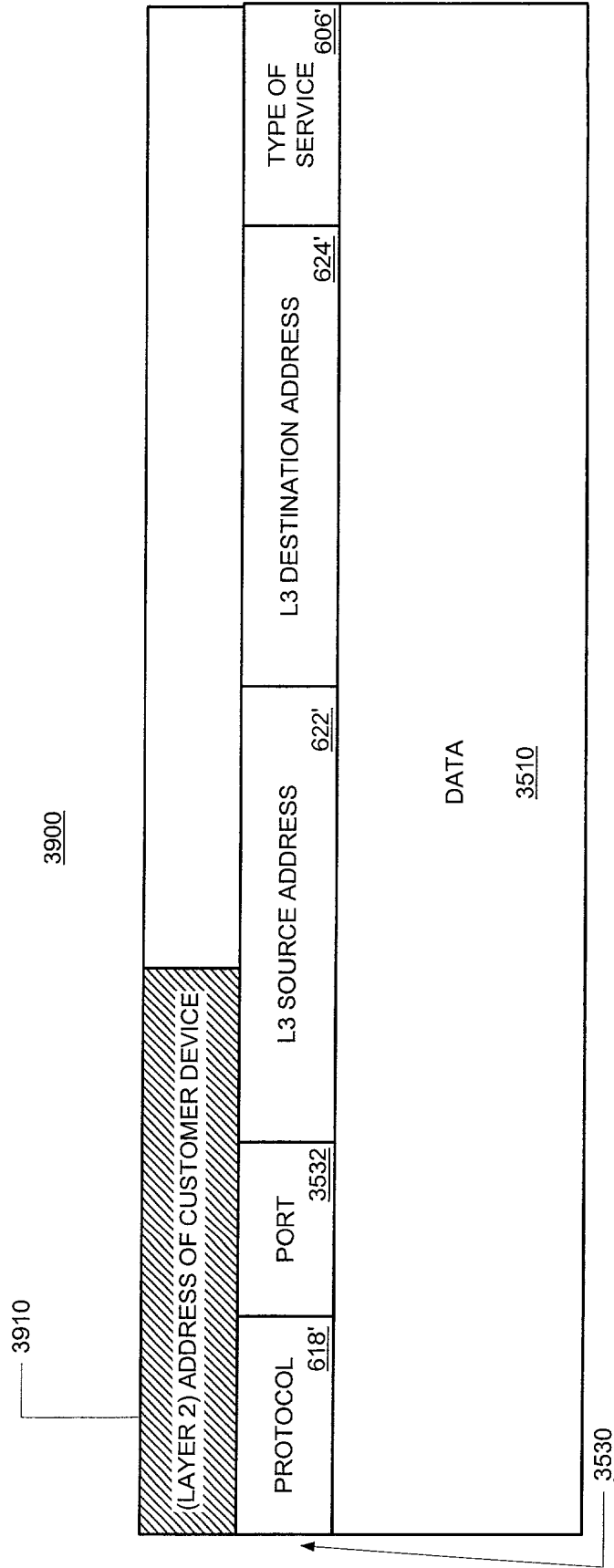


FIGURE 39



The diagram illustrates a packet structure 4000, which is divided into three main sections: L3 SOURCE ADDRESS (INGRESS ACCESS ROUTER - TABLE) 4032, L3 DESTINATION ADDRESS (UPDATE FACILITY) 4034, and SERVICE LEVEL 4036. The L3 SOURCE ADDRESS section is further divided into four sub-sections: VPN-INDEX (32 BITS) 4022, QoS (8 BITS) 4024, VPN-OUI (24 BITS) 4026, and LOGICAL INGRESS PORT (32 BITS) 4028. The L3 DESTINATION ADDRESS section is divided into two sub-sections: CoS (16 BITS) 4029 and an unlabeled section 4020. The SERVICE LEVEL section is also divided into two sub-sections: CoS (16 BITS) 4029 and an unlabeled section 4020. The entire packet structure is labeled 4000.

ADVERTISEMENT DATA
(e.g., RIP PACKET)